SMS-1P

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 4 ohm load driven, from 40Hz-20kHz rated 14 watts per channel minimum RMS power, with more than 0.9% total harmonic distortion from 250mW to rated output.

Speaker

Speaker system
  Full range bass reflex
Speaker unit
  10 cm (3 15/16 inches) dia. cone type
Nominal Impedance
  4 ohms
Power handling capacity
  Nominal 25 W
Maximum
  50 W
Sensitivity
  88 dB/W/m
Frequency range
  80 Hz-16 kHz (-10 dB)
Enclosure volume
  Approx. 3.2 liters

Amplifier

Output
  15 W
Inputs
  CHANNEL 1
    Pin jack x 1
    Standard jack x 1
  CHANNEL 2
    Balanced terminal x 1
    Standard jack x 1
Input level
  Balanced terminal : + 4 dB
  Standard jack : – 10 dB
  Pin jack : – 10 dB
Input impedance
  Balanced terminal : 600 ohms
  Standard jack : 10 kilohms
  Pin jack : 10 kilohms
Tone controls
  BASS 100 Hz : ±6 dB
  TREBLE 10 kHz : ±6 dB

General

Dimensions
  Approx. 132 x 210 x 230 mm (w/h/d)
  (5 1/4 x 8 1/4 x 9 1/16 inches)
  EXCLUDING projecting parts and controls

Mass
  Approx. 3.3 kg (7 lb 4 oz)

Design and specifications are subject to change without notice.

POWERED MONITOR SPEAKER SYSTEM

SONY®

使用時は添付資料も参照のこと
Refer to the additional documents.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

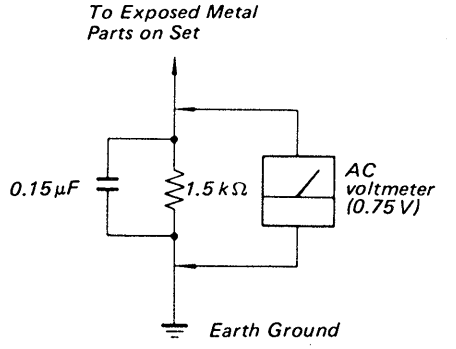


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

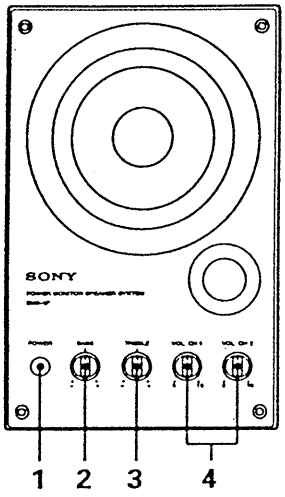
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

This section is extracted from instruction manual.

Names and Functions of Parts

Front



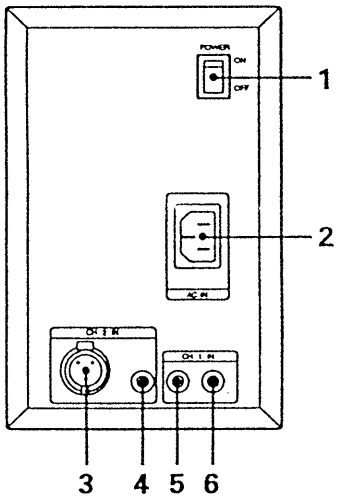
1 POWER indicator
Lights when the POWER switch is set to the ON position.

2 BASS knob
Turn to the right to increase the level of the bass. Turn to the left to decrease the level of the bass.
(Increasing the level of the bass when listening at high volumes may cause the sound to distort.)

3 TREBLE knob
Turn to the right to increase the level of the treble. Turn to the left to decrease the level of the treble.

4 VOL. (volume) CH1 and CH2 knobs
Turning the VOL. CH1 or VOL. CH2 knob to the right increases the volume of the source connected to the respective input.
If nothing is connected to one of the input terminals, set the respective knob to the "0" position.
These knobs can also be used to adjust the mix balance of sound sources connected to CH1 and CH2.

Rear



1 POWER switch
Turns the power to the speaker ON/OFF. (Before turning the power ON, be sure the VOL. CH1 and VOL. CH2 knobs are set to the "0" position.)

2 AC socket
Connect to a 120 V wall outlet using the supplied power cord to.

3 CH 2 IN Balanced terminal
Balanced input terminal for channel 2. Connect to the output terminal of a professional mixing console (etc.).

4 CH 2 IN Standard terminal
Standard input terminal for channel 2. Connect to the output terminal of an electronic instrument (etc.).

5 CH 1 IN Standard terminal
Standard input terminal for channel 1. Connect to the output terminal of an electronic instrument (etc.).

6 CH 2 IN Pin plug terminal
Pin plug input terminal for channel 1. Connect to the output terminal of an audio component (etc.).

SECTION 2
DIAGRAMS

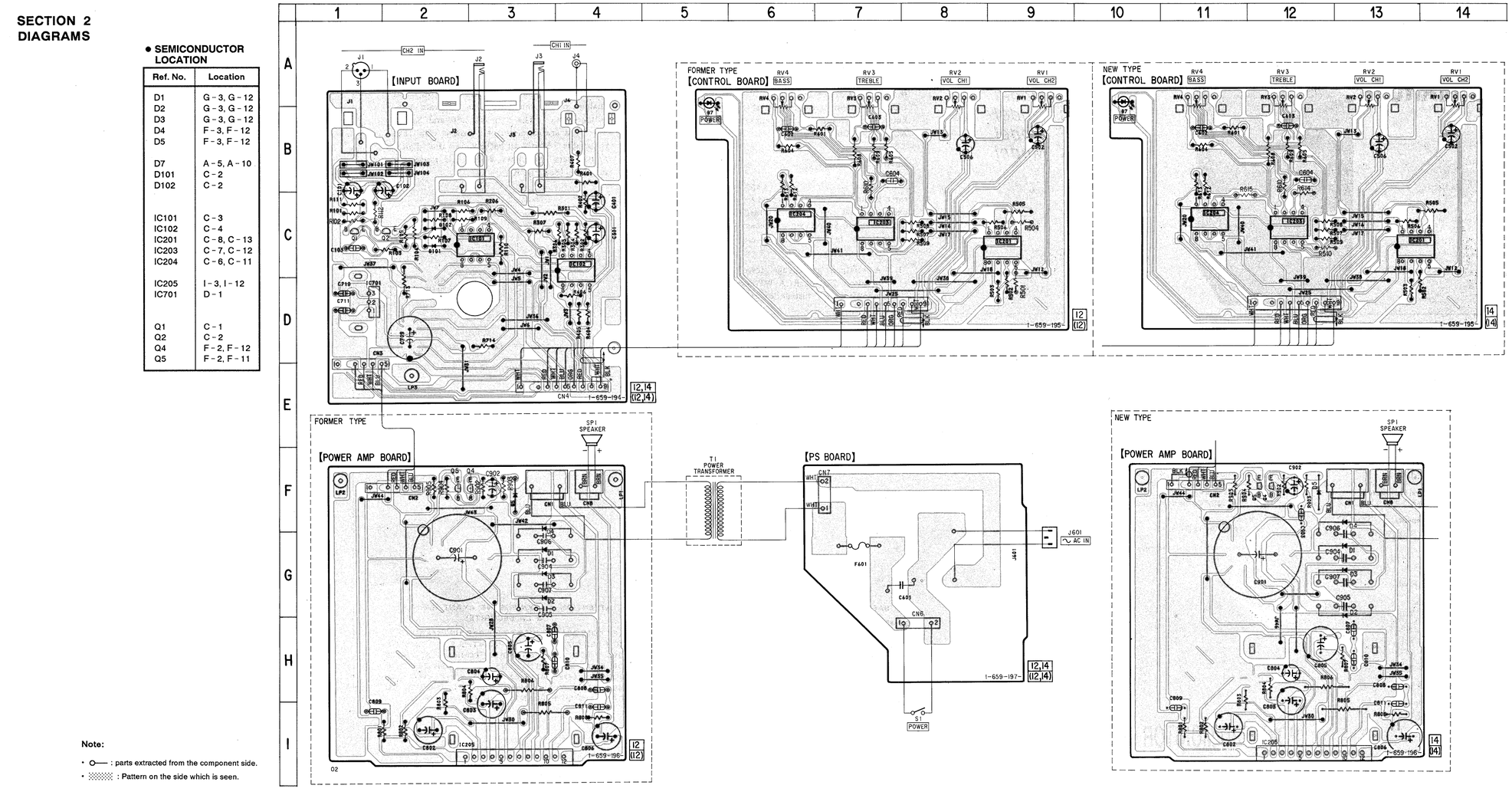
● SEMICONDUCTOR LOCATION

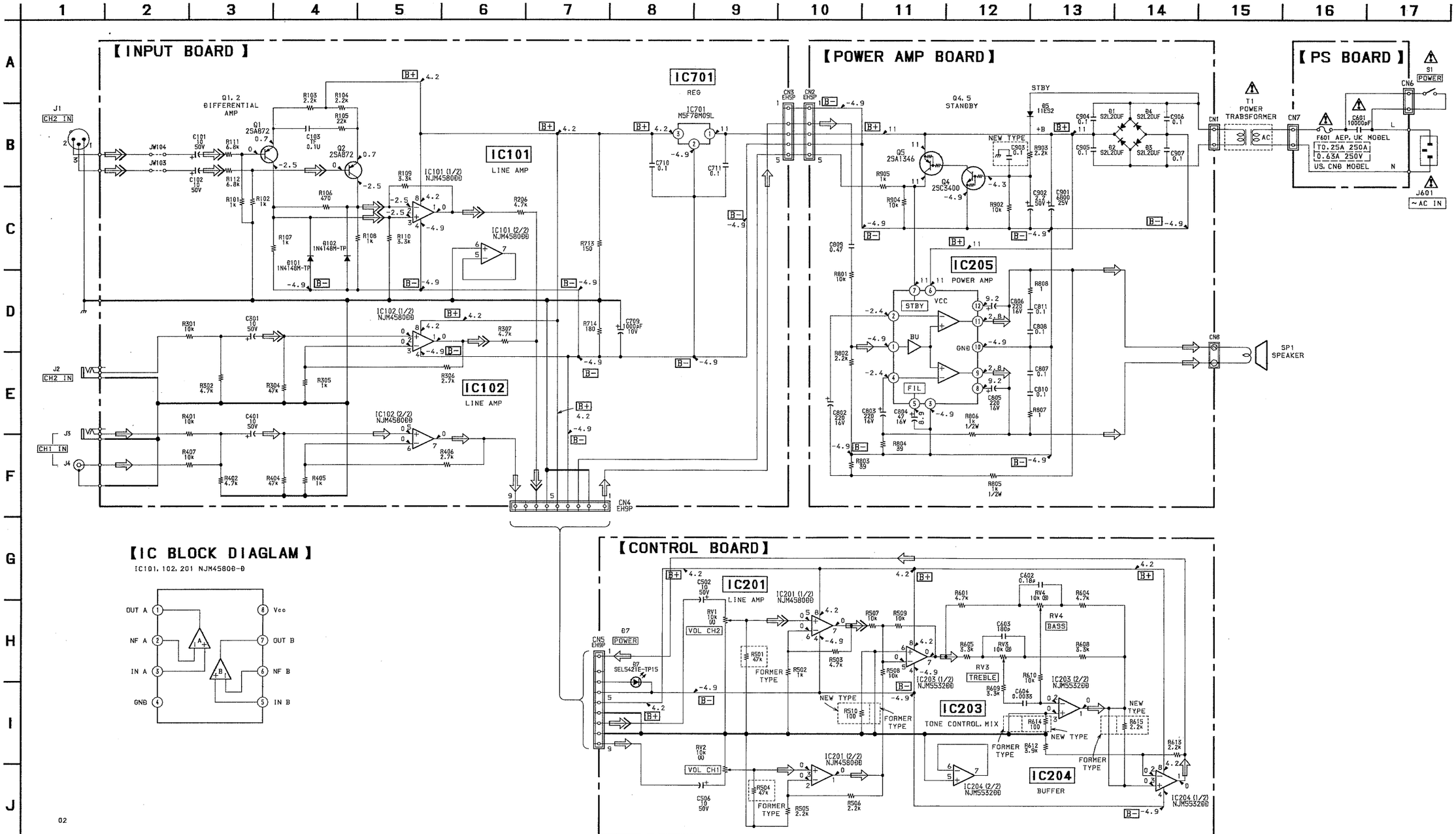
Ref. No.	Location
D1	G - 3, G - 12
D2	G - 3, G - 12
D3	G - 3, G - 12
D4	F - 3, F - 12
D5	F - 3, F - 12
D7	A - 5, A - 10
D101	C - 2
D102	C - 2
IC101	C - 3
IC102	C - 4
IC201	C - 8, C - 13
IC203	C - 7, C - 12
IC204	C - 6, C - 11
IC205	I - 3, I - 12
IC701	D - 1
Q1	C - 1
Q2	C - 2
Q4	F - 2, F - 12
Q5	F - 2, F - 11

Note:

- ○— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

2-1. PRINTED WIRING BOARDS





【IC BLOCK DIAGLAM】

IC101, 102, 201 NJM4580B-D

02

Note :

- All capacitors are in μ F unless otherwise noted. pF: μ μ F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- **B+** : B+ Line
- **B −** : B − Line
- Voltage are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - ⇨ : CH1
  - ⇨ : CH2

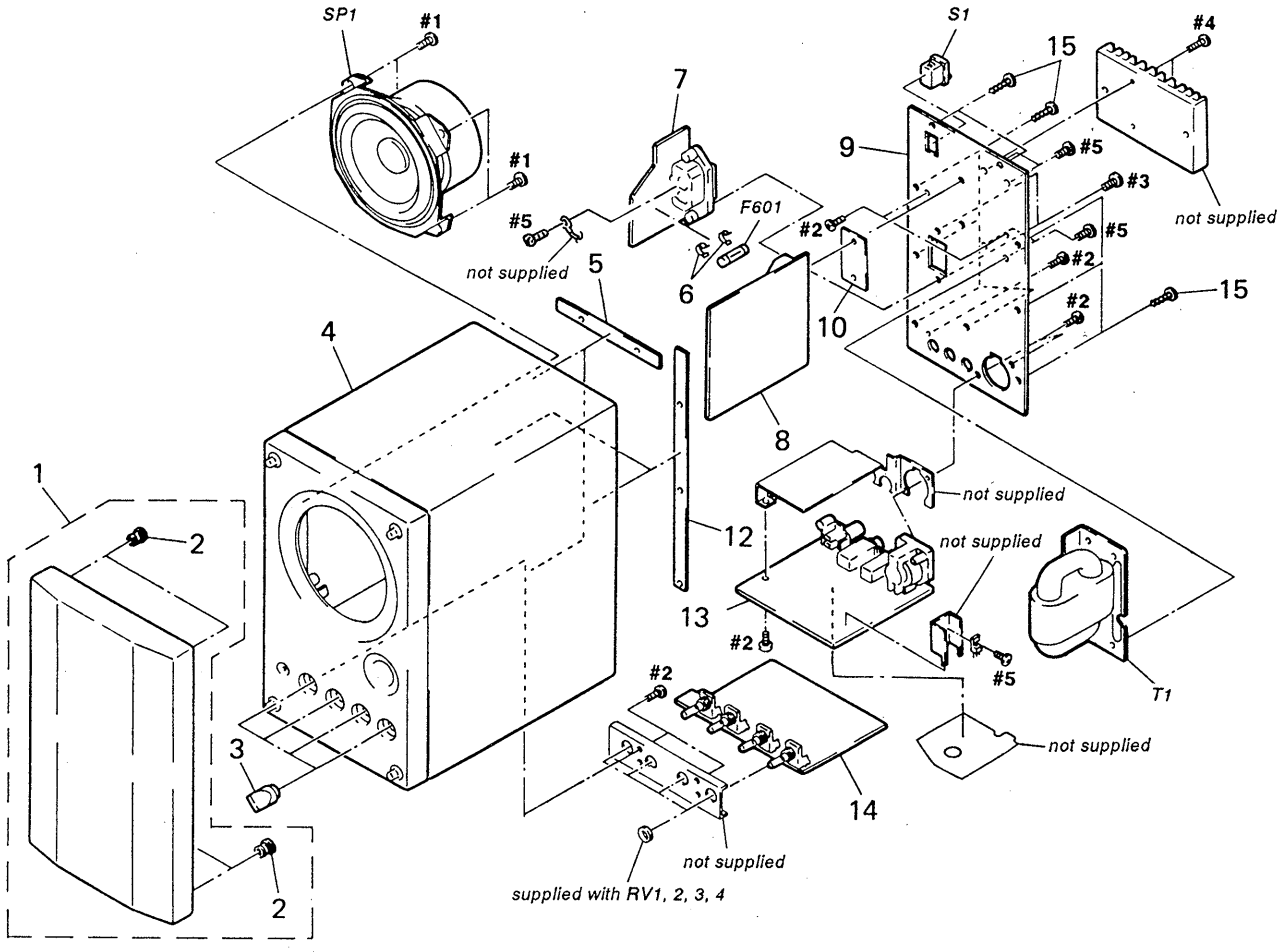
SECTION 3
EXPLODED VIEW

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ..... (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
1	X-4946-874-1	COVER ASSY	
* 2	4-963-075-01	CATCHER	
3	4-980-582-01	KNOB (BLACK)	
3	4-980-582-11	KNOB (WHITE)	
4	A-4361-964-A	CABINET ASSY, SPEAKER (US,CND)(BLACK)	
4	A-4361-965-A	CABINET ASSY, SPEAKER (US,CND) (WHITE)	
4	A-4384-006-B	CABINET ASSY, SPEAKER (AEP,UK) (BLACK)	
4	A-4384-007-B	CABINET ASSY, SPEAKER (AEP,UK) (WHITE)	
5	4-980-586-01	PACKING (B)	
6	1-533-293-11	FUSE HOLDER	
* 7	1-659-197-11	PS BOARD	
* 8	A-4389-470-A	POWER AMP BOARD, COMPLETE	
* 9	4-980-576-22	PLATE, REAR (AEP,UK)	
* 9	4-980-576-22	PLATE, REAR (US,CND)	

Ref. No.	Part No.	Description	Remark
* 10	4-980-584-01	SHEET, INSULATING	
12	4-980-585-01	PACKING (A)	
* 13	A-4389-468-A	INPUT BOARD, COMPLETE	
* 14	A-4389-469-A	CONTROL BOARD, COMPLETE	
15	4-874-614-61	SCREW (4) (3.5X16), TAPPING	
⚠ F601	1-532-614-00	FUSE, CYLINDRICAL (TIME-LAG) (T0.25A 250V) (AEP,UK)	
⚠ F601	1-576-098-11	FUSE (0.63A 250V) (US,CND)	
⚠ S1	1-571-306-11	SWITCH, SEESAW (AC POWER)	
SP1	1-505-255-11	SPEAKER (10CM) (BLACK)	
SP1	1-505-258-11	SPEAKER (10CM) (WHITE)	
⚠ T1	1-429-477-21	TRANSFORMER, POWER (US,CND)	
⚠ T1	1-429-478-21	TRANSFORMER, POWER (AEP,UK)	

CONTROL **INPUT**

SECTION 4
ELECTRICAL PARTS LIST

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation
  CND : Canadian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-4389-469-A	CONTROL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C502	1-124-721-71	ELECT	10uF	20% 50V	
C506	1-124-721-71	ELECT	10uF	20% 50V	
C602	1-136-168-00	FILM	0.18uF	5% 50V	
C603	1-110-338-51	MYLAR	180PF	5% 50V	
		< CONNECTOR >			
CN5	1-691-771-11	PLUG (MICRO CONNECTOR) 9P			
		< DIODE >			
D7	8-719-046-43	LED SEL5421E-TP15 (POWER)			
		< IC >			
IC201	8-759-710-59	IC NJM4580D-D			
IC203	8-759-982-03	IC RC5532DD			
IC204	8-759-982-03	IC RC5532DD			
		< RESISTOR >			
R501	1-249-437-11	CARBON	47K	5% 1/4W	(FORMER TYPE)
R502	1-249-417-11	CARBON	1K	5% 1/4W	
R503	1-249-425-11	CARBON	4.7K	5% 1/4W	
R504	1-249-437-11	CARBON	47K	5% 1/4W	(FORMER TYPE)
R505	1-249-421-11	CARBON	2.2K	5% 1/4W	
R506	1-249-421-11	CARBON	2.2K	5% 1/4W	
R507	1-249-429-11	CARBON	10K	5% 1/4W	
R508	1-249-429-11	CARBON	10K	5% 1/4W	
R509	1-249-429-11	CARBON	10K	5% 1/4W	
R510	1-247-807-31	CARBON	100	5% 1/4W	(NEW TYPE)
R601	1-249-425-11	CARBON	4.7K	5% 1/4W	
R604	1-249-425-11	CARBON	4.7K	5% 1/4W	
R605	1-249-423-11	CARBON	3.3K	5% 1/4W	
R608	1-249-423-11	CARBON	3.3K	5% 1/4W	
R609	1-249-423-11	CARBON	3.3K	5% 1/4W	
R610	1-249-429-11	CARBON	10K	5% 1/4W	
R612	1-249-424-11	CARBON	3.9K	5% 1/4W	
R613	1-249-421-11	CARBON	2.2K	5% 1/4W	
R614	1-247-807-31	CARBON	100	5% 1/4W	(NEW TYPE)
R615	1-249-421-11	CARBON	2.2K	5% 1/4W	(NEW TYPE)
		< VARIABLE RESISTOR >			
RV1	1-225-197-11	RES, VAR, CARBON 10K (VOL CH2)			
RV2	1-225-197-11	RES, VAR, CARBON 10K (VOL CH1)			
RV3	1-225-198-11	RES, VAR, CARBON 10K (TREBLE)			
RV4	1-225-198-11	RES, VAR, CARBON 10K (BASS)			
**********					
*	A-4389-468-A	INPUT BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-124-721-71	ELECT	10uF	20% 50V	
C102	1-124-721-71	ELECT	10uF	20% 50V	
C103	1-136-165-00	FILM	0.1uF	5% 50V	
C301	1-124-721-71	ELECT	10uF	20% 50V	
C401	1-124-721-71	ELECT	10uF	20% 50V	
C709	1-124-677-41	ELECT	1000uF	20% 10V	
C710	1-136-165-00	FILM	0.1uF	5% 50V	
C711	1-136-165-00	FILM	0.1uF	5% 50V	
		< CONNECTOR >			
CN3	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
CN4	1-691-771-11	PLUG (MICRO CONNECTOR) 9P			
		< DIODE >			
D101	8-719-987-63	DIODE 1N4148M			
D102	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC101	8-759-710-59	IC NJM4580D-D			
IC102	8-759-710-59	IC NJM4580D-D			
IC701	8-759-701-59	IC NJM78M09FA			
		< JACK >			
J1	1-580-060-11	RECEPTACLE, CONNECTOR 3P (CH2 IN)			
J2	1-568-498-31	JACK, LARGE TYPE (CH2 IN)			
J3	1-568-498-31	JACK, LARGE TYPE (CH1 IN)			
J4	1-774-785-11	JACK, PIN 1P (CH1 IN)			
		< TRANSISTOR >			
Q1	8-729-035-76	TRANSISTOR 2SA-872-ETZ			
Q2	8-729-035-76	TRANSISTOR 2SA-872-ETZ			
		< RESISTOR >			
R101	1-249-417-11	CARBON	1K	5%	1/4W
R102	1-249-417-11	CARBON	1K	5%	1/4W
R103	1-249-421-11	CARBON	2.2K	5%	1/4W
R104	1-249-421-11	CARBON	2.2K	5%	1/4W
R105	1-247-863-91	CARBON	22K	5%	1/4W
R106	1-249-413-11	CARBON	470	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-417-11	CARBON	1K	5%	1/4W
R109	1-249-423-11	CARBON	3.3K	5%	1/4W
R110	1-249-423-11	CARBON	3.3K	5%	1/4W
R111	1-249-427-11	CARBON	6.8K	5%	1/4W
R112	1-249-427-11	CARBON	6.8K	5%	1/4W
R206	1-249-425-11	CARBON	4.7K	5%	1/4W
R301	1-249-429-11	CARBON	10K	5%	1/4W
R302	1-249-425-11	CARBON	4.7K	5%	1/4W
R304	1-249-437-11	CARBON	47K	5%	1/4W
R305	1-249-417-11	CARBON	1K	5%	1/4W
R306	1-249-422-11	CARBON	2.7K	5%	1/4W
R307	1-249-425-11	CARBON	4.7K	5%	1/4W
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-249-425-11	CARBON	4.7K	5%	1/4W
R404	1-249-437-11	CARBON	47K	5%	1/4W
R405	1-249-417-11	CARBON	1K	5%	1/4W
R406	1-249-422-11	CARBON	2.7K	5%	1/4W
R407	1-249-429-11	CARBON	10K	5%	1/4W
R713	1-249-407-11	CARBON	150	5%	1/4W
R714	1-249-408-11	CARBON	180	5%	1/4W
**********					
*	A-4389-470-A	POWER AMP BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C802	1-124-686-71	ELECT	220uF	20%	16V
C803	1-124-686-71	ELECT	220uF	20%	16V
C804	1-126-967-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description			Remark
C805	1-124-686-71	ELECT	220uF	20%	16V
C806	1-124-686-71	ELECT	220uF	20%	16V
C807	1-136-165-00	FILM	0.1uF	5%	50V
C808	1-136-165-00	FILM	0.1uF	5%	50V
C809	1-136-173-00	FILM	0.47uF	5%	50V
C810	1-136-165-00	FILM	0.1uF	5%	50V
C811	1-136-165-00	FILM	0.1uF	5%	50V
C901	1-104-650-11	ELECT	6800uF	20%	25V
C902	1-124-925-11	ELECT	2.2uF	20%	100V
C903	1-136-165-00	FILM	0.1uF	5%	50V (NEW TYPE)
C904	1-136-165-00	FILM	0.1uF	5%	50V
C905	1-136-165-00	FILM	0.1uF	5%	50V
C906	1-136-165-00	FILM	0.1uF	5%	50V
C907	1-136-165-00	FILM	0.1uF	5%	50V
		< CONNECTOR >			
CN1	1-564-321-00	PIN, CONNECTOR 2P			
CN2	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
CN8	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
		< DIODE >			
D1	8-719-027-43	DIODE S2L20UF			
D2	8-719-027-43	DIODE S2L20UF			
D3	8-719-027-43	DIODE S2L20UF			
D4	8-719-027-43	DIODE S2L20UF			
D5	8-719-200-82	DIODE 11ES2			
		< IC >			
IC205	8-759-195-91	IC uPC2505H (1)			
		< TRANSISTOR >			
Q4	8-729-029-86	TRANSISTOR DTC124ESA			
Q5	8-729-900-63	TRANSISTOR DTA124ES			
		< RESISTOR >			
R801	1-249-429-11	CARBON	10K	5%	1/4W
R802	1-249-421-11	CARBON	2.2K	5%	1/4W
R803	1-249-400-11	CARBON	39	5%	1/4W
R804	1-249-400-11	CARBON	39	5%	1/4W
R805	1-260-099-11	CARBON	1K	5%	1/2W
R806	1-260-099-11	CARBON	1K	5%	1/2W
R807	1-249-381-11	CARBON	1	5%	1/4W
R808	1-249-381-11	CARBON	1	5%	1/4W
R902	1-249-429-11	CARBON	10K	5%	1/4W
R903	1-249-421-11	CARBON	2.2K	5%	1/4W
R904	1-249-429-11	CARBON	10K	5%	1/4W
R905	1-249-417-11	CARBON	1K	5%	1/4W
		< CAPACITOR >			
C604	1-130-477-00	MYLAR	0.0033uF	5%	50V
**********					

PS

Ref. No.	Part No.	Description	Remark
*	1-659-197-11	PS BOARD	
		*********	
	1-533-293-11	FUSE HOLDER	
		< CAPACITOR >	
⚠ C601	1-113-925-11	ELECT 0.01uF 20% 250V	
		< CONNECTOR >	
* CN6	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	
CN7	1-564-321-00	PIN, CONNECTOR 2P	
		< FUSE >	
⚠ F601	1-532-614-00	FUSE, CYLINDRICAL (TIME-LAG) (T0.25A 250V)	(AEP,UK)
⚠ F601	1-576-098-11	FUSE (0.63A 250V) (US,CND)	
		< JACK >	
⚠ J601	1-251-234-11	INLET, AC (~ AC IN)	
**********			
		MISCELLANEOUS	
		**********	
6	1-533-293-11	FUSE HOLDER	
⚠ F601	1-532-614-00	FUSE, CYLINDRICAL (TIME-LAG) (T0.25A 250V)	(AEP,UK)
⚠ F601	1-576-098-11	FUSE (0.63A 250V) (US,CND)	
⚠ S1	1-571-306-11	SWITCH, SEESAW (AC POWER)	
SP1	1-505-255-11	SPEAKER (10CM) (BLACK)	
SP1	1-505-258-11	SPEAKER (10CM) (WHITE)	
⚠ T1	1-429-477-21	TRANSFORMER, POWER (US,CND)	
⚠ T1	1-429-478-21	TRANSFORMER, POWER (AEP,UK)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
⚠	1-534-827-14	CORD, POWER (US,CND)	
⚠	1-590-910-11	CORD SET, POWER (AEP,UK)	
	3-810-741-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,	GERMAN)
*	4-982-845-01	INDIVIDUAL CARTON (BLACK)	
*	4-982-846-01	INDIVIDUAL CARTON (WHITE)	
*	4-982-847-01	CUSHION	
**********			

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-661-79	SCREW +BVTP 4X12 TYPE2 SLIT	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-685-661-19	SCREW +BVTP 4X12 TYPE2 N-S	
#4	7-685-876-09	SCREW +BVTT 3X16 (S)	
#5	7-682-561-09	SCREW +BVTT 4X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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